

The following is documentation of actions by UC as related to the industrial hygiene, worker history, and health outcomes datasets during the Marysville, Ohio worker occupational exposure reconstruction and analysis.

A: IH exposure data

- Identified and eliminated 15 duplicate records. A review of all industrial hygiene samples revealed 15 duplicate records in Track Unload for 1977. These were eliminated from the dataset.
- Changed fiber ratio of Libby Amphibole to South Carolina ore from 10:1 to 8.7:1. This update was a direct result of the elimination of the above-mentioned 15 duplicate records which were used in the original calculations.

B: Worker Exposure History

- Corrected work histories for four workers (11435, 11878, 13549, 17909). A review of the worker history database identified four cases of double counting time due to recorded overlap in job history. The work histories were updated accordingly.
- Allowed for workers to continue in Central maintenance after 1983 (10527, 11197, 12015, 12416, 14635, 14868, 14920, 15677, 17455, 17839). Although central maintenance was outsourced after 1983, ten participants continued working in that department after 1983. The database was updated to allow for these workers to continue working and accumulating exposure in that department.

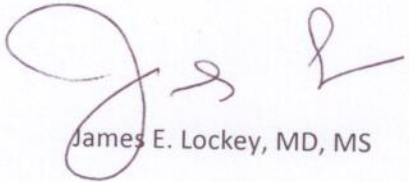
C: X-ray data

- Updated localized pleural thickening (LPT) results for workers who also had diffuse pleural thickening (DPT). Originally, LPT was provided as LPT only (without DPT). DPT included workers with or without LPT. Region 8 asked for an update that workers with LPT have an indication whether DPT was also present or not. DPT as provided was unchanged and includes all workers with DPT, regardless if they have LPT or not.
- Re-classification of 1980 data from B-reader forms (16920, 17289, 18036, 18216, 18733, 19648, 19982). Health outcomes from 1980 classified as DPT in the data set originally provided to the EPA were re-classified as pleural thickening (PT) as the B-reader form used in 1980 did not allow for reporting of the current definition of DPT. Workers with a diagnosis of pleural plaque in the 1980 study were classified as LPT in the original and updated data set provided to the EPA. If both pleural plaque and pleural thickening are present in the same worker, the worker is classified in the updated data set as LPT plus PT.
- Age at X-ray. Age at X-ray was corrected for three workers (15757, 19670, 19760)
- Rationale for categorizing as negative two workers who were positive for pleural changes in 1980 and negative for pleural changes in 2004 (17352, 17847). Asbestos-caused LPT or DPT is a permanent finding that does not resolve with time. The absence of these findings on subsequent films suggest a temporary cause of the 1980 finding such as localized acute inflammation from potential recent rib fracture, fat tissue, or pleural effusion that resolved.

Other potential causes are B-reader variability in film interpretation and changes in the ILO interpretation criteria for pleural thickening. Consequently, UC recommends that EPA rely on the 2004 x-ray results for these two workers.

D: Smoking information

- As requested by EPA, UC provided an Excel spreadsheet with additional smoking data. The additional data provided were the historic "ever/never smoke status" as reported in Rohs et al 2007. These data differ slightly from the previously provided "best estimate" data which were developed after the Rohs paper using both the 1980 and 2004 smoking datasets.

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